

Frequency Mixer

Level 13 (LO Power +13 dBm) 50 to 1000 MHz

TUF-2MHSM+



CASE STYLE: NNN150
PRICE: \$11.45 ea. QTY (1-9)

Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power	200mW
IF Current	40mA

Pin Connections

LO	4
RF	1
IF	2
GROUND	3
CASE GROUND	3

Features

- low conversion loss, 6.0 dB typ.
- high isolation, 47 dB typ. L-R, L-I
- wideband, 50 1000 MHz
- rugged welded construction

Applications

- VHF/UHF
- cellular
- ISM/GSM

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

Electrical Specifications

FREQUENCY (MHz)		CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)						IP3 @ CENTER BAND (dBm)
LO/RF	IF	Mid-Band m			Total Range Max.	L		M		U		L		M		U		Typ.
		\bar{X}	σ	Max.		Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.			
50-1000	DC-1000	6.0	0.25	7.5	9.0	58	40	47	30	37	25	55	35	47	20	32	18	19

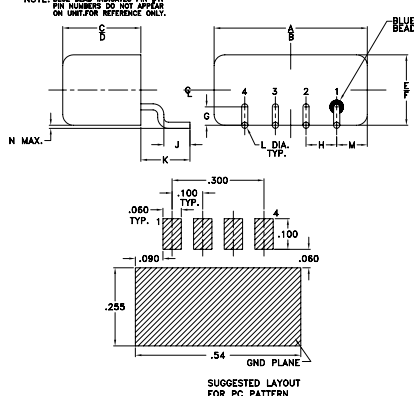
1 dB COMP.: +9 dBm typ.

L = 50-100 MHz M = 100-500 MHz U = upper range [$f_u/2$ to f_u]
m = mid band [$2f_l$ to $f_u/2$]

Typical Performance Data

Frequency (MHz)		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)
RF	LO	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm
50.00	80.00	5.81	57.10	55.26	1.03	2.51
100.00	70.00	5.85	51.37	49.62	1.05	2.39
129.17	99.17	5.79	49.27	47.63	1.07	2.41
200.00	170.00	5.74	46.10	44.54	1.10	2.28
208.33	178.33	5.73	45.84	44.23	1.13	2.36
287.50	257.50	5.70	43.58	42.34	1.17	2.26
340.28	310.28	5.67	42.34	40.78	1.19	2.29
366.67	336.67	5.69	41.82	40.13	1.21	2.28
445.83	415.83	5.72	40.63	37.78	1.26	2.29
498.61	468.61	5.75	39.34	36.04	1.28	2.29
500.00	470.00	5.75	39.33	36.00	1.29	2.28
551.39	521.39	5.86	38.49	34.15	1.33	2.32
630.56	600.56	5.90	38.05	32.59	1.38	2.35
683.33	653.33	6.06	38.00	31.67	1.41	2.33
709.72	679.72	6.12	38.21	31.02	1.43	2.30
788.89	758.89	6.33	38.31	29.48	1.49	2.44
868.06	838.06	6.58	37.78	28.55	1.53	2.37
947.22	917.22	6.88	37.88	27.56	1.60	2.48
973.61	943.61	6.98	37.84	27.05	1.62	2.49
1000.00	970.00	7.05	37.64	26.57	1.64	2.45

Outline Drawing

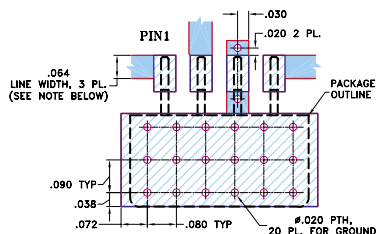


Outline Dimensions (inch)

A	B	C	D	E	F	G
.50	.48	.255	.240	.23	.21	.06
12.70	12.19	6.48	6.10	5.84	5.33	1.52

H	J	K	L	M	N	wt
.100	.09	.16	.020	.09	.005	grams
2.54	2.29	4.06	0.51	2.29	0.13	1.9

Demo Board MCL PIN: TB-201 Suggested PCB Layout (PL-081)



Electrical Schematic

